Editor
Robert Green

MICOM

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THE MICROCOMPUTER CLUB OF MELBOURNE
P.O. Box 60. Canterbury 3126

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This Meeting

As you can see by the above banner, the date of the next MICOM meeting has been changed. If you turn up on the 17th (as advertised last month), you will be all alone! The meeting is on Saturday the **24th** of March. Also, the venue is a little bit different to the usual. FOR THIS MONTH ONLY, we will be meeting in the **Canteen** at Burwood. The canteen, if you can't remember it from last year, is behind the Pheonix Theatre, just below our usual venue. We will try to organise a few signs around the place, in case you get lost.

Coming attractions:

MARCH C Day
SPEAKER: Dr Matthew Fagan
SUBJECT: Software, sales tax etc:
What's happening?
USERS TO BRING: Systems running C, manuals etc.
(The MICOM C course will also be discussed)

APRIL Communications Day.
MAY Modula-2 and UCSD Day.
JUNE Forth Day.
JULY Film Day.(planned but not yet finalised)
AUGUST Graphics Day.(planned but not finalised)
SEPTEMBER Knowledge Based Systems/Technology Day.

The Editorial Buffer

Last year we published an editorial, which stated in effect MICOM's policy on software copyright, shortly afterwards a decision by the high court TEMPORARILY put an end to copyright on Computer software. Since then MICOM established a sub committee to further consider software copyright, the report of which was published last month. The report showed however that many members are still confused as to what is copyrighted and what isn't, for instance there was a reference made to the recent U.S. High court decision on recording of T.V. programs off air. This decision however was based on the fact that stations pay for the right to put the program to air, and distribute at no further charge, with the intention that the viewer watch the programme. There is nothing to say how ofter the viewer watch the programme, or that the programme be viewed at the time it is put to air. This concept does not apply to computer software, since, when a copy of a computer program is purchased the purchaser is not given the right to distribute the material in

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any way shape or form even if no money is to change hands. It should be noted that at this time, it IS illegal to record TV programmes upon which copyright is claimed, Australian law DOES NOT follow American law in this area.

Over the last few months MICOM has become a forum for free, and quite open discussion (even argument) on this subject, it should however be remembered that all of the opinions which have been put forward are those of individuals, and do not necesarily reflect MICOM policy, even where those opinions are held by members of the committee.

At this time it is unknown what the new law on software copyright will hold in store, but whatever it is MICOM will be obligated to uphold that law in any way it can. With this in mind we can only suggest to anyone who at this time is using software which they may soon have no legal right to, to start saving up their money.

Meeting times and venues

The Microcomputer Club of Melbourne **(MICOM)** meets at 2 pm on the third Saturday of each month at Burwood State College, in the community resources centre, building E.
Meeting dates are:
March 24th, April 21st, May 19th
15th, October 20th, November 17

The CP/M Users Group of Melbourne **(CPMUG)** meets at 7.30 pm on the fourth Tuesday of each month at Burwood State College, in the community resources centre, building E.
Meeting dates are:
March 22nd, April 24th, May 22nd
25th, October 23rd, November 27

The Peach Users Group **(PUG)** meets at Templestowe Technical College, Cypres Ave Templestowe, at 8 pm on the first Friday of each month.
Meeting dates are:
March 2nd, April 6th, May 4th
October 5th, November 2nd

The Victorian Big Board Group **(VBBG)** meets at members homes. For more information contact Geoff Kidd at work on 433 2364.
Meeting dates are:
March 21st, April 4th, May 2nd
October 3rd, November 7th

The Otrona Users Group is forming
Meeting dates have not been finalised yet.

MICOM operates a Computerised Bulletin Board System (CBBS) for message transfers between MICOM members. The access password for members appears on the mailing label on this newsletter. Limited visitor access is available for non-members. The system operates continuously, and may be accessed via a 300 baud modem on **(03) 762 5088.**

Pesterable MICOM people (during decent hours):

Marcus Wigan	(President)	277 6003
Geoff Halprin	(Vice President)	859 9871
Andrew Stewart	(Secretary)	428 1290
Fulvio Gerardi	(Treasurer)	288 4712
Robert Green	(Publications)	818 6343
David Green	(Promotions)	241 6673
Stephen Thomas	(Membership)	836 7364
Haig Jason	(Purchasing)	288 5648
Dav-id Furst	(CPMUG chairman)	BH 267 6800
Branko Colavizza	(PUG chairman)	434 2541
Nigel Leith	(MAGE chairman)	878 3154
Geoff Kidd	(VBBG chairman)	BH 433 2364
David Broadbent	(Otrona chairman)	

Victorian Big Board Group

The Bigboard group is getting bigger. We have outgrown the loungeroom that has accommodated us over the last few months, and so we are currently investigating a new venue to hold our meetings in as from April. The group will (hopefully) meet privately for the last time on March 21st. Watch the Micom newsletter & bulletin board for the new venue next month. We decided to meet regularly on the first Wednesday in each month as from April. An attendance charge of $1 per head per meeting from April should cover venue hiring costs.

At the last meeting a BB-II was demonstrated running 8" and 5" drives simultaneously. Details of how this was done (as well as other items of interest) are available from our growing User Group library. For information on the Big Board group, ring Geoff Kidd (433 2364 B.H.). We have arranged to have information on the group enclosed with each new bigboard sold, and so far we have had enquiries from Western Australia and Queensland as a result of this.

Geoff Kidd

1200 Baud Modems and their PITFALLS by Haig Jason

A great many people are wanting to buy 1200 baud modems, without fully realizing the problems they may be facing. The 1200 baud modems that are available at the moment mostly use the AMD 7910 chip. The 7910 uses FSK modulation and conforms to CCITT V.21 & V.23 (also Bell 103 & 202). V.21 is the standard for 300 baud that is currently being used by all but a few club members. It is a full duplex system, (that is one can communicate in both directions simultaneously).

V.23 however is quite different, it is a half duplex system (i.e. one direction at a time), and the 1200 baud is only in one direction, in the other direction (which is called the back channel), data is sent at 75 baud. This presents an immediate problem if your computer (or terminal) cannot handle different baud rates for transmit and recieve. Hardware changes usually have to be made like cutting tracks to the UART or serial port. If your baud rates are software selectable you have the further problem of generating the second baud rate in hardware. This sadly is not all, the back channel utilizes a different set of RS232 pins designated for this purpose, not the normal receive pin. Is your computer hardware connected to these? And what

about software?

Some people have said to me that they would like to ring some of the bulletin boards in the U.S. and 1200 baud would be more ecconomical. True I guess, but please realise that the back channel for Bell 202 is 50 baud.

As you can see 1200 baud half duplex requires a bit of effort to get going and will rarely be a "plug and use" job. Is it worth the effort? Personally, I think not. I haven't seen lots of computer manufacturers catering for half duplex and I think they are holding out for someone to produce a 1200 baud full duplex chip that is going to make life a lot easier (AMD have reserved some locations in their mode table perhaps for this pupose). Until then I would stick to 300 baud as the cost is somewhat less. Also if you are using your modem for bulletin boards only, I can't see anyone digesting the screen content even with speed reading. Unless you are transferring large files on the phone then V.23 is an expensive luxury that one can do without. Don't forget that you have to find someone at the other end running V.23 also.

Haig Jason

Announcing yet another MICOM first!

As you all know, MICOM has always been on the leading edge of technology. In this vein, we are about to embark on a new state-of-the-art project. On the first of next month, MICOM's new CSS (Computerized Satellite System) will begin operations. This will enable you to communicate via modem (300 baud initially; 1200/75 available later) with a number of Australian bulletin boards as well as American systems such as the Source. Required hardware will be a terminal or a computer with terminal software, a modem (Telecom approved, naturally), a 12" parabolic dish antenna, microwave transmitter with pigeon screen and a big red DANGER sign. Antenna positioning gear will not be necessary, as CSS will be in geosynchronous orbit. "How has all this become possible at such short notice?" you ask. How indeed? MICOM has booked one cubic foot of space on the next space shuttle flight, into which we have crammed the following equipment:

* One pair of servo-controlled wirecutters
* One servo-controlled soldering iron
* One servo-controlled ratchet screwdriver
* Four servo-controlled solid fuel micro-rockets
* One miniaturized, servo-controlled automatic metal detector and transponder
* One remote-controlled flashlight with heavy duty batteries
* One long bent thing with a sort of lump on one end
* One automatic, servo-controlled, digitizing optical surveillance unit (an Instamatic with a CB radio telemetry link)
* Dual emergency battery powered backup CB radio telemetry link units
* Russian phrase book

* "Lasers for Fun and Profit" by Professor Homer T. Farnsfarfle (Russian translation)
* One 6" concave mirror with servo-controlled positioning equipment
* One bell
* One whistle
* One servo-controlled ultra-miniaturized echo sounder
* Another bell
* Another whistle
* One sub-micro-miniaturized single-chip BLUTACK-80 with Votrax Russian speech synthesizer, complete with portable IBM servo-controlled document reader
* Backup bell
* Backup whistle
* One instruction manual for long bent things with a sort of lump on one end
* One corrugated cardboard container (with fold-out solar cell panels) to contain all this sensistive equipment

When positioned in geosynchronous orbit above Melbourne, the CSS initiator (described above) will fold out its solar panels and immediately transmit a 'ready' signal via the primary telemetry link. In the event of a failure in the

primary telemetry link, the BLUTACK unit will select the secondary link. If this link should also prove to be non-operational, the tertiary link will be enabled. In the unlikely circumstance that none of the telemetry links can be persuaded to function, a 'SNAFU' signal will be sent via the primary whistle.

Upon attainment of telemetry acquisition handshaking, Ground Control will direct the BLUTACK unit to commence the primary parasitic search sequence. At this point, all hell breaks loose. The flashlight is enabled, the metal detector is activated, the primary bell (see note 1) begins to emit sonic vibrations, the echo-sounder goes into HUNT mode, the soldering iron attains pre-heat status and the Votrax begins to jabber in random Russian as a cover.

When a positive indication is obtained from any or all of the above detectors, the BLUTACK will go into Primary Target Acquisition mode (see note 2). The micro-rocket motors will ignite, propelling the package in the approximate general direction of the target. We have complete faith in the package's ability to eventually "latch onto" the target.

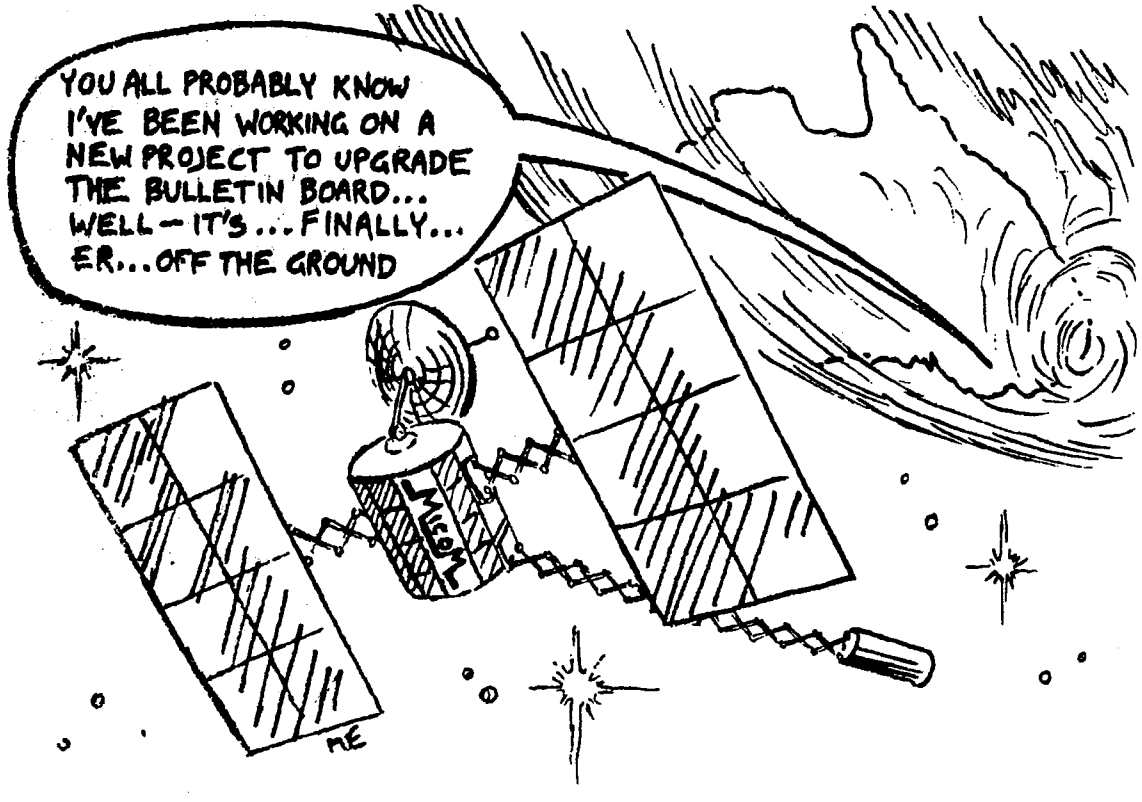
The digitizing optical surveillance unit then comes into play and in conjunction with the currently enabled telemetry link indentifies the target for the benefit of Mission Control. Once Mission Control has determined (by reference to the appropriate Installation Manual) the target identity, the wirecutters and the soldering iron will be manipulated so as to sever the target's own telemetry link after approximately 5 sec. of random Russian has been injected by the Votrax. Mission Control will then focus a laser beam (using the concave mirror) so as to destroy any radio equipment which resists the attempts of the screwdriver to retune it to our frequencies.

We should by this stage have complete control over the target (probably an Intelsat) and should also have convinced its owner(s) that it was destroyed by a Russian hunter-killer satellite.

To reinforce this impression, the initiator will emit a loud, almost explosive blast on all available whistles, jettison the long, bent thing

with a sort of lump on one end and remove the target to an orbit more suited to our purpose.

Once the target is positioned in its new orbit, Mission Control will destroy the Russian phrase-book and the instruction manual for long bent things with a sort of lump on one end using the ground-based laser. The initiator's final act before self-destructive re-entry will be to scatter the pages of "Lasers for Fun and Profit" (Russian edition) to lend weight to the theory that "da Commies done it" should an investigation ever be called.


YOU ALL PROBABLY KNOW I'VE BEEN WORKING ON A NEW PROJECT TO UPGRADE THE BULLETIN BOARD... WELL — IT'S ... FINALLY... ER... OFF THE GROUND
MICOM
ME

Note 1: Should the primary bell fail to operate, the secondary bell will be used instead. If that doesn't work either, the tertiary bell will be selected. In the unlikely event of total bell collapse, a 'FUBAR' signal will be transmitted over the secondary and tertiary whistles.

Note 2: Middle C.

Note 3: This space intentionally left blank.

ASSEMBLY LANGUAGE QUICKIES by Stephen Thomas

ASCII conversions and falling through creatively

Last month I threw in six bytes of Z80 code with a challenge to figure out what they did. How did you go? In fact, the routine is a binary to ASCII nybble converter, taking an input value between 00H and 0FH and producing an equivalent ASCII character. Inputs in the range 00H-09H produce outputs in the range 30H-39H; inputs in 0AH-0FH produce outputs in 41H-46H. Traditionally it's done like this:

```
ASCNYB: ADD A,30H  ;convert 0-9 to "0"-"9"
        CP  3AH    ;was nybble in 0AH-0FH?
        JR  C,NEXT ;skip if not
        ADD A,7    ;yes, adjust to "A"-"F"
NEXT:
```

Compare that with last month's routine:

```
CP  0AH     ;set carry if 00H-09H, clear otherwise
CCF         ;complement (not clear) carry flag
ADC A,30H   ;add 30H if it was 00H-09H, else 31H
DAA         ;add another 6 if it wasn't in 00-09
```

Malcolm English has shown me another six-byte routine that does the same job:

```
ADD A,90H  ;00-0F -> 90-9F
DAA        ;90-99 -> 90-99; 9A-9F -> 00-05 + cy
ADC A,40H  ;90-99 -> D0-D9; 00-05 + cy -> 41-46
DAA        ;D0-D9 -> 30-39; 41-46 -> 41-46
```

Two-byte savings like this may not seem worth the trouble, but they can be VERY useful. Bear in mind that you can't fit 2050 bytes of code into a 2048 byte EPROM! And anyway, they're FUN!

While on the subject of space-saving, here's a technique that'll speed up programs as well as compress them. It's based on the fact that a CALL immediately followed by a RETURN can always be replaced by a JUMP. Consider:

```
CALL THINGY
RET
```

Why not just JMP THINGY? THINGY must be a subroutine, or you wouldn't be CALLing it, so it must have a RET at the end of it - why not use that instead of one following the CALL? It saves code, stack space and execution time.

It's possible to do even better than that if the subroutine can be placed right after another routine that calls it, because then even the jump is redundant. This is called "falling through". Here's an example of three subroutines, each useful in its own right, which use each other and share a common RET.

```
;16 bit binary to hex conversion
;
;Input: binary number in BC
;Output: Four ASCII digits in DE,HL (msd in D)
;       Least sig digit also in A.
;
ASCWRD: LD   A,B    ;get ms byte
        CALL ASCBYT ;convert to 2 digs in HL
        EX   DE,HL  ;save ms 2 digs
        LD   A,C    ;get ls byte and fall into
;
;8 bit binary to hex conversion
;
;Input: binary number in A
;Output: Two ASCII digits in HL (msd in H)
;
ASCBYT: LD   H,A    ;save input byte
        RRCA        ;shift hi nybble down
        RRCA
        RRCA
        RRCA
        CALL ASCNYB ;convert to digit in L
        LD   H,L    ;save ms digit
        LD   A,H    ;restore input and fall into
;
;4 bit binary to hex conversion
;
;Input: binary number in low nybble of A
;Output: ASCII digit in A & L
;
ASCNYB: AND  0FH    ;discard hi nybble
        CP   0AH    ;yes, this IS one byte
        SBC  A,69H  ;shorter than last month's
        DAA         ;equivalent!
        LD   L,A
        RET
```

By the way, if anybody else has any useful tips and tricks, I'd love to hear about them. Find me at a meeting or write them down and send them to the Editor.

Micom Bulk Buys

Those of you who have been hounding me about Verbatim disks should take note that we are now stocked up. The prices are very good due to the huge quantity we bought. In fact I have spent our entire budget to buy these disks, so I expect a rush when you read this. To make sure your favourite format if available, be early. I have also been rushed on disk storage boxes, so if you don't want to miss out ring me first! I have not received new stocks of printer ribbons yet, but I will definitely have some by this coming meeting, especially MX80, MX100 and MICROLINE 84. Well, we have finally run out of modems, but you CAN still order one. I am stalling a bit to see what is about to pop onto the market, but I can still get Cicadas in the meantime. The plastic binders that are on the price list are excellent value. They are very well made. The 15" ones especially are a bargain for those people who do their listings at work and don't have anywhere to store them once they get them home. SNAP THESE UP! (Six bright colours available). If you have a filing cabinet, or even if you don't, we have a few filing frames left for $3 which you can hang suspension folders in. If you don't have any suspension folders, we can sell you some of them too. As these items are from last year's stock, Fulvio is holding them, and you should contact him if you want some.

Cicada 300 baud modems (with cable)	$190
RS232 4-wire cables to suit standard modems	$ 20
Cables made to order	$POA

Lockable Disk storage boxes:

8" 40 disk capacity (F40)	$ 40
8" 90 disk capacity (F90)	$ 55
5" 40 disk capacity (M35)	$ 30
5" 90 disk capacity (M85)	$ 45

Diskettes:

Nashua		Verbatim Datalife	
5" ss/sd	$ 40	5" ss/sd	$ 34
5" ds/dd	$ 50	5" ds/dd	$ 47
8" ss/sd	$ 50	8" ss/sd	$ 38
8" ds/dd	$ 60	8" ds/dd	$ 52

Printer Ribbons:

C.ITOH 8510	$ 9
IBM Selectric II (Orange leader)	$ 3
IDS	$ 15
MX-80	$ 10
MX-100	$ 15
Okidata Microline 84	$ 6
Other ribbons available on special order	$POA

'Almost Standard' 9.5"x11" paper	$ 26
Assorted scrap 9" & 15" paper (approx.)	$ 20
15" Plastic Computer listing binders	$ 3
9" Plastic Computer listing binders	$ 3
Empty 8" plastic library boxes	$ 7
Empty 5" diskette boxes (Verbatim-style)	$ 3
3M (Scotch) data cartridges	$POA

MICOM T-shirts (CBBS cartoon)	$ 7
MICOM Windcheaters (MICOM logo available)	$ 13

The following items will be discontinued once current stocks are exhausted:

Twinlock Fastfit suspension filing frames	$ 3
Twinlock Crystalfile suspension folders	70 cents

Haig Jason 288 5648 9am - 9pm

CP/M Notes by John Quirk

A program that I find very handy to have on my system is the CATalogue (CAT for short) package. This suite of programs I feel you would also find useful on your CP/M system.

This package keeps a track of all your disk files for you with a minimum of overhead. All that is needed is one special directory entry on each disk which CAT uses as a disk name.

CAT is also nice because it is FREE, and available thru MICOM's CPMUG, on vulume 40 of the CPMUG library. The programs you will need are:

CAT.COM
FMAP.COM
UCAT.COM
MAST.CAT
CATALOG.DOC

Once you have these files read CATALOG.DOC, this will help you to get the catalog system up and running.

If you have only one disk on your system then you will also need UCAT.ASM which is on volume 25, you will need MAC.COM to assemble this program which has to be bought from DIGITAL RESEARCH. Also on this disk is the source files for the CATALOG package.

These programs become really useful once you have more that 2 boxes of diskettes, believe me, I could not find anything on my disk's until I started using the CAT program.

Well that's about it for this month, and please if you have any comments, drop me a line via the CBBS.

John Quirk

Parity Checking by Steve Dart

In the last newsletter I read the plea from the editorial staff that there were insufficient contributions from the membership. Here is my attempt to alleviate the situation. The subject is parity errors and error checking in general.

Every time I hear a computer user say "I have never had a memory error !", I cringe and shrug my shoulders in disbelief. I recall the maker of faulty parachutes who said he had never had any user complaints. Perhaps the computer user meant to say "I have never had a memory error on the part of memory that my test program works on", or more specifically, "my memory test program has never found a detectable error".

The hardest errors to detect are transient soft errors. A single memory cell flipping from one state to another. These do occur (albeit rarely), are not reproducible and are not even detectable unless you have parity at least. And you can forget the exotic error checking and correction which is available only on larger machines.

The effect of dropping a bit in memory can range from nothing to a system crash. Drop a bit from code which you have already finished using and no-one will ever notice. If you drop a bit from the return address on the stack, you will never even find where you called the subroutine from. Not even with a memory dump. Drop a bit from a temporary variable while calculating a P.A.Y.E. installment and you may have a lawsuit on your hands. Which brings me to the question "Who needs parity?". Certainly, we enthusiasts are prepared to do without. I think that parity is needed most by small business. Or, more generally, by those doing work requiring large systems reliability on a limited budget.

And this is where the story really starts.

Recently I have had the opportunity to examine in detail two systems that have parity on memory as an advertised feature. Both are 16-bit systems and both run MS-DOS or CPM-86.

Example one: NEC APC

This system has 256k bytes of parity checked memory, so we should be able to expect four times as many errors as on systems with only 64k. The documentation supplied with this unit is quite thorough. The circuit diagram shows quite clearly that the instant a memory error occurs, an LED will light up on the offending card. It's a pity though that it's inside the machine, where no-one will see it. Hardly worth having really.

Example two: IBM-PC

This system currently has 256k also. However, a new application planned for this machine will require 512k, doubling the expected error rate. The hardware situation here is somewhat better than with the NEC. The parity detection logic is tied to an interrupt line that will notify the

processor that something has gone wrong. But, that interrupt has currently been masked out. If you want to use the parity interrupt, you will have to write your own memory parity error interrupt routine, and add it to the BIOS before you can enable that interrupt bit in the mask.

So there you have it. Still like parachutes. Either you buy the silk sheet or the nylon cord to hang from. No-one as yet has thought enough to sell you both. At least the IBM won't require a hardware modification to get it going.

Steve Dart

Kaypro Tip

Bob Sherlock has recently converted a Kaypro II to a Kaypro 8 using a MicroCornucopia Pro-8 kit. He recommends this mod as a simple (20 minute) modification, which will give your Kaypro 800k disk drives instead of the standard 190k. All for about $700 depending on the drives you use. And, you also get to keep your old drives as well.

For Sale:

Bob Sherlock from down Morwell way has available a Micropolis 1043-2 disk drive with power supply which he no longer requires. It includes an S-100 controller, 2 system disks, 10 blank (never used) diskettes and documentation (as supplied by Dick Smith). All he wants for it is $300. You can call him on (051) 34 6998 or, if you have a modem, via his RCPM system on (051) 34 1563

1. New SSDD 5¼" disk drive $250 one only.
2. DSDD 5¼" disk drives $450 12 month guarentee.
3. IBM-PC printer & cable $875 (unused).
4. IBM-PC software, DOS 1.1 (inc Basic) $60, Easywriter $250, Visicalc $300.

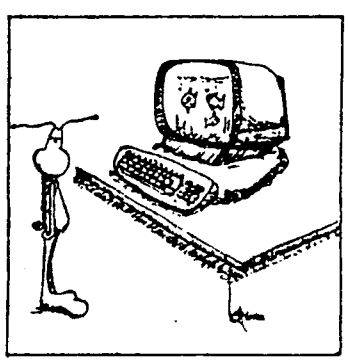
Items 3 & 4 are brand new, approx 20% off list price, ONO. Contact Graeme Bond on 560-4948 AH.

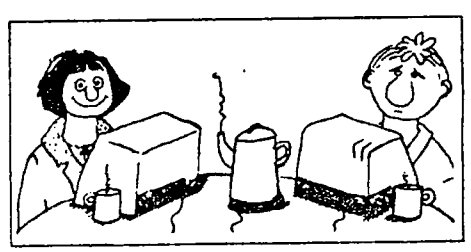
MICOM discounters:

ABACUS COMPUTER STORE, 512 Bridge Rd. Richmond - 5%-10% selected items
CHALLENGE, Shop 16B Doncaster Shoppingtown - tell 'em we sent you
COMPAK COMPUTER CENTRE, 350 South Rd. Moorabbin - tell 'em we sent you
COMP-SOFT, 235 Swan St. Richmond - tell 'em we sent you
COMPUTERLAND, 123 Lonsdale St. Melbourne - 7.5% on most goods
CONTEMPORARY SOUND CENTRE, 87-89 Riversdale Rd. Hawthorn - 10% all goods
DEFOREST SOFTWARE, 26 Station St. Nunawading - 10% on software
ENTERCOM COMPUTER CO., 136 Bridge Rd. Richmond - tell 'em we sent you
GSE COMPUTERS, cnr Middleborough & Eley Rds Blackburn Sth - 10% on all items
GERARDI PHOTOGRAPHICS, 167 Elgin St. Carlton - 10% on all goods
HARDERS EDUCATION & COMPUTER CONSULTANCY SERV., 941 Heatherton Rd. Springvale - tell 'em we sent you
MIND GAMES, 275 Glenferrie Rd. Malvern, 591 Chapel St. Sth Yarra, & 200 Bourke St. Melb - 10% on all lines
PANATRONICS, 691 Whitehorse Rd. Mont Albert - 10% on selected items
THE COMPUTER FACTORY, 136 Bridge Rd. Richmond - tell 'em we sent you
THE LOGIC SHOP, 212 High St. Windsor - tell 'em we sent you

Club meeting venues

AUSOM - Burwood State College. Building E 1.30pm
COMPUCOLOR - Users Group. Panatronics, 691 Whitehorse Rd, Mont Albert.
CPMUG - Burwood State College. Building E 7.30pm
ESEUG - Eastern Suburbs 80 U/G. Kingswood College. Station St Box Hill 7pm
FORTH - Interest Group. 65 Martin Rd. Glen Iris. 8pm
KAOS - Essendon Primary School. Cnr. Nicholson & Raleigh Sts. Essendon
MACE - Melb Atari Computer Enthusiasts. Rotunda Monash Uni 12 noon.
MICROBUG - Microbee Users Group. Burwood State College 7.30pm
PEACH - Users Group. Templestowe Technical College. Cypres Ave Templestowe. 8pm
PENINSULA - Frankston East Hall, Beach St, Frankston, 7.30pm
SCUA - Sorceror Computer Users of Australia. Burwood State College. 2pm
TEACH-80 - Waverley Community Centre, Miller st., Mt Waverley.
VBBG - Call Geoff Kidd, 433-2364 (BH).





THE MICROCOMPUTER CLUB OF MELBOURNE
P.O. Box 60, Canterbury 3126

Project Planning Sheet

YEAR: 1984

MONTH: MAR/APR

Mon	Tues	Wed	Thur	Fri	Sat	Sun	
12 MARCH	13	14	15	16	17	18	CBBS 762 5088
19	20	21 VBBG ESEUG	22 CPMUG	23	24 MICOM	25	
26	27	28	29	30	31	1 APRIL SCUA	
2	3	4 TEACH-80	5	6 PUG FORTH	7 AUSOM	8	
9	10 PENINSULA COMPUCOLOR	11	12	13	14	15	

Application form for new members,
annual fee $10.00.
Send to MICOM,
P.O. Box 60, Canterbury.

MICOM:
THE MICRO COMPUTER CLUB OF MELBOURNE

Name: _____

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